

The Environmental Impact Statement (EIS) provides information about the Roberts Bank Terminal 2 Project, identifies potential effects and benefits of the Project, and describes mitigation measures to reduce potential Project effects. The EIS has been prepared according to the “Guidelines for the Preparation of an Environmental Impact Statement for the Roberts Bank Terminal 2 Project”, issued by the Canadian Environmental Assessment Agency in January 2014.

COASTAL BIRDS

The Fraser River estuary is an important ecosystem for overwintering and migrating birds, supporting large numbers of numerous species. An assessment was undertaken to determine the effects of the Roberts Bank Terminal 2 Project on coastal birds.

The results of the coastal birds assessment were considered in the assessments of marine commercial use, outdoor recreation, human health, and current use of land and resources for traditional purposes.

SCOPE OF ASSESSMENT

The assessment of coastal birds focused on seven sub-components:

- Shorebirds, represented by Pacific dunlin and western sandpiper;
- Waterfowl, represented by American wigeon and brant;
- Herons, represented by great blue heron;
- Diving birds, represented by surf scoter and western grebe;
- Raptors, represented by bald eagle, barn owl and peregrine falcon;
- Gulls and terns, represented by Caspian tern and glaucous-winged gull; and
- Passerines, also known as songbirds, represented by barn swallow.

Anticipated Project-related changes to coastal birds were assessed by considering potential changes in productivity, abundance, density, species diversity, distribution and suitable habitat area, for the seven sub-components. For some sub-components, foraging opportunity and contaminant levels were also examined.

Coastal birds in the Roberts Bank area have been studied for decades. The assessment was based on a combination of literature review, field studies conducted from 2012 to 2014, and predictive modelling. Field studies focused on factors influencing shorebird use of the area, shorebird diet composition and area, genetic differences, waterbird habitat use and human-related bird mortalities.

The local assessment area included Roberts Bank, and the regional assessment area included Roberts Bank, Roberts Bank North, the Fraser River South Arm Marshes, Sturgeon Bank, Boundary Bay and adjacent agricultural habitat extending 8 kilometres inland.

The cumulative effects assessment area included the regional assessment area plus the Strait of Georgia, Burrard Inlet, and the Fraser River east to the Port Mann Bridge.

EXISTING CONDITIONS

Existing conditions were characterized for the sub-components of shorebirds, waterfowl, herons, diving birds, raptors, gulls and terns, and passerines. Existing conditions for coastal birds are influenced by previous developments and activities at Roberts Bank including the development of the Roberts Bank and BC Ferries terminals, the dynamic natural environment, availability and quality of habitat, and availability and quality of food resources.

An estimated 1.4 million birds, representing more than 250 species, use Roberts Bank and the Fraser River estuary. Use of the area varies throughout the year, with the greatest abundance occurring during shorebird migratory periods (northward in the spring, and southward in the fall) or during winter. During migration, western sandpiper and Pacific dunlin stop to replenish energy and fat reserves, feeding on biofilm and marine invertebrates found in the area.

Waterfowl are regularly found in the Roberts Bank area and foraging and resting were the primary uses in intertidal and upland areas. Near the Roberts Bank terminals, the abundance of several diving waterbird species such as surf scoters and western grebe was noted to be highest in spring and lowest in summer. Resident, migratory and overwintering raptor species use the Fraser River estuary. Bald eagles, the most common raptor at Roberts Bank, are observed resting, hunting, feeding and preening year-round on intertidal mudflats and port-related infrastructure. Gulls and terns use the intertidal and subtidal habitat for swimming, feeding and resting. Gulls are present throughout the year, while terns are present between April and October. Passerines have been observed foraging over shallow coastal waters. The coastal bird species that spend all or portions of their life within estuaries such as Roberts Bank are well adapted and resilient to a wide range of abiotic conditions, including salinity, sediment grain size and turbidity.

POTENTIAL EFFECTS

Interactions between Project components and activities and coastal birds were considered and the following potential adverse effect was identified:

- Potential productivity loss during construction and operation phases as a result of activities for terminal land development, tug basin expansion and causeway widening, terminal footprint-related changes to habitat quality or losses of subtidal habitat, and vehicle collisions.

MITIGATION MEASURES

Measures to avoid, reduce or offset the potential effect include:

- Placement of terminal in subtidal waters;
- Reduced footprint of causeway widening;
- Rounded northwest terminal corner to reduce scour;
- Incorporation of rocky shoreline in terminal perimeter;
- Timing of construction activities to avoid periods when diving birds are abundant in the area (coincides with the Dungeness crab timing window);
- Implementation of construction and operation environmental management plans related to noise, underwater noise, light, traffic management, and maintaining water and sediment quality;
- Creation of habitat including eelgrass, intertidal marsh, mudflat and sandy gravel beach;
- Development and implementation of measures to mitigate effects to barn owls from vehicle collisions, in collaboration with transportation authorities and the Canadian Wildlife Service.

KEY FINDINGS

Changes in the productive potential of shorebirds, herons, raptors, gulls and terns, and passerines are not anticipated, as changes to key habitats are minimal and primary food sources are predicted to increase.

Decreases to the productivity potential for waterfowl and diving birds are expected to be minor. Effects to waterfowl can be mitigated through the creation of eelgrass, mudflat and intertidal marsh habitats. Effects to diving birds can be partially offset through the creation of on-site eelgrass and subtidal rock reef habitats, which would create habitat for their prey, which include mussels and other invertebrates.

Vehicle collision-related mortalities are anticipated to be very low compared to population size, and are not expected to affect the short- and long-term population viability of coastal birds, with the exception of barn owls. Port Metro Vancouver would work with transportation authorities and the Canadian Wildlife Service to develop and implement measures to mitigate potential effects to barn owls from vehicle collisions.

Overall, the Project is not expected to compromise the productive potential of the local area to support coastal bird productivity, or change to species' viability. The assessment concludes there are no significant adverse residual effects from the Project to coastal birds. The Project is not expected to result in measurable incremental adverse cumulative effects to coastal birds.

About the Roberts Bank Terminal 2 Project

The Roberts Bank Terminal 2 Project is a proposed new three-berth container terminal at Roberts Bank in Delta, B.C., on Canada's west coast. The Project would provide 2.4 million twenty-foot equivalent units (TEUs) of container capacity. Port Metro Vancouver proposes to build the Project to meet increasing demand for containerized trade on the west coast of Canada.

The Project is undergoing a federal environmental assessment by an independent review panel, under the *Canadian Environmental Assessment Act, 2012*. The Project is also undergoing an assessment under the *British Columbia Environmental Assessment Act*, and requires other permits and authorizations before it can proceed.

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